

SLU 4525.1

AMENDMENT TO THE CLAIMS

1-38. (canceled)

39. (previously presented) A method for correlating scan images of a body part, the method comprising:

storing images of a body part in a memory to create a three-dimensional body image coordinate system;

determining the position of the body part in the three-dimensional body image coordinate system using remote sensors;

obtaining a planar scan image of the body part;

determining the position of the planar scan image of the body part in the three-dimensional body image coordinate system;

retrieving from the images of the body part, an image of the body part corresponding to the position of the planar scan images; and

displaying the planar scan image and the image of the body part corresponding to the position of the planar scan image.

40. (previously presented) The method of claim 39, further comprising determining the position of a probe in the three-dimensional body image coordinate system, retrieving from the images of the body part an image of the body part corresponding to the position of the probe, and displaying on the boundary of the body part an image representing the probe at the body part.

41. (canceled).

42. (previously presented) A method for correlating scan images of a body part, the method comprising:

storing images of a body part in a memory to create a three-dimensional body image coordinate system;

determining the position of the body part in the three-dimensional body image coordinate system using remote sensors;

SLU 4525.1

obtaining a planar image of the body part;
determining the position of the planar image of the body part in the three-dimensional body image coordinate system;
retrieving, from the images of the body part, an image of the body part corresponding to the position of the planar image;
determining the boundary of the body part in the retrieved image; and
displaying the planar image and the boundary of the body part corresponding to the position of the planar image.

43. (previously presented) The method of claim 42, further comprising determining the position of a probe in the three-dimensional body image coordinate system, retrieving from the images of the body part an image of the body part corresponding to the position of the probe, and displaying on the boundary of the body part an image representing the probe at the body part.

44. (previously presented) The method of claim 42 wherein the obtained planar image of the body part is a scanned image.

45. (currently amended) A method for correlating scan images of a body part, the method comprising:

storing images of a body part in a memory to create a three-dimensional body image coordinate system;
determining the position of the body part in the three-dimensional body image coordinate system using remote sensors;
obtaining a planar image of the body part;
determining the a position and an orientation of the planar image of the body part in the three-dimensional body image coordinate system;
determining the position of a probe in the three-dimensional body image coordinate system;
retrieving, from the images of the body part, an image of the body part corresponding to the position of the probe; and

SLU 4525.1

displaying the planar image and the image of the body part corresponding to the orientation of the planar image and position of the probe.

46. (previously presented) A method of claim 45 further comprising determining the boundary of the body part in the retrieved image and displaying the boundary of the body part.

47. (previously presented) A method of claim 45 wherein the obtained planar image of the body part is a scanned image.

48. (previously presented) A method of claim 45 further comprising displaying on the image of the body part an image representing the probe at the body part.

49. (previously presented) A method for correlating scan images of a body part, the method comprising:

storing images of a body part in a memory to create a three-dimensional image coordinate system, the images of the body part being correlatable to the body part;

positioning a body part in a body part coordinate system;

determining the position of the body part in the body part coordinate system using remote sensors;

correlating the images of the body part and the three-dimensional image coordinate system to the position of the body part in the body part coordinate system;

obtaining a planar scan image of the body;

determining the position of the planar scan image of the body part in the body part coordinate system;

determining the position of the planar scan image of the body in the image coordinate system based on the position of the planar scan image of the body part in the body part coordinate system;

retrieving, from the images of the body part, an image of the body part corresponding to the position of the planar scan image; and

SLU 4525.1

displaying the planar scan image and the image of the body part corresponding to the position of the planar scan image.

50. (previously presented) The method of claim 49, further comprising determining the boundary of the body part in the retrieved image and displaying the boundary of the body part.

51. (previously presented) The method of claim 49, further comprising determining the position of a probe in the three-dimensional image coordinate system, retrieving from the images of the body part an image of the body part corresponding to the position of the probe, and displaying on the image of the body part an image representing the probe at the body part.

52. (previously presented) A method for determining the position of a body part in images of a body part, the method comprising:

reading first images of the body part from a memory, the images including previously scanned images of the body part in a three-dimensional image coordinate system, the body part having reference points in relation to the body part;

communicating the position of the body reference points to an array located remote from the body part;

determining the position of the body part in a three-dimensional body part coordinate system based on the communicated position of the body reference points;

correlating the position of the body part in the body part coordinate system to the position of the body part in the image coordinate system based on the position of the body reference points in the body part coordinate system and in the image coordinate system;

scanning the body part to obtain a planar scan image of the body part;

correlating the planar scan image of the body part to the first images of the body part;

retrieving, from the first images of the body part, an image of the body part corresponding to the position of the planar scan image; and

SLU 4525.1

displaying the planar scan image and the image of the body part corresponding to the position of the second planar scan image.

53. (previously presented) The method of claim 52, further comprising determining the boundary of the body part in the retrieved image and displaying the boundary of the body part.

54. (previously presented) The method of claim 52, further comprising determining the position of a probe in the three-dimensional body part coordinate system, retrieving from the images of the body part an image of the body part corresponding to the position of the probe, and displaying on the image of the body part an image representing the probe at the body part.

55. (currently amended) A system for determining the position of a body part in images of a body part, the system comprising:

an array separate from the body part;

body reference points fixed in relation to the body part, the position of the body reference points adapted to be in a position to communicate with the array to provide information concerning the position of the body part and establish a three-dimensional body part coordinate system;

a memory storing first images of the body part establishing a three-dimensional image coordinate system, the first images correlatable to the body reference points and the body part coordinate system, and the memory storing ~~second~~ planar scan images of a body part, the planar scan images correlatable to the body part coordinate system; and

a processor in communication with the array, the processor (i) determining the position of the body reference points and the body part in the three-dimensional body-part coordinate system based on the information provided by the body reference points and the array, (ii) determining the position of the body part in the three-dimensional image coordinate system based on the position of the body reference points in the body part coordinate system, (iii) correlating the first scan images of the body part and the

SLU 4525.1

image coordinate system to the body part coordinate system, (iv) correlating the ~~second~~ planar scan images to the body part coordinate system, (v) determining the position of at least one planar scan image of the body part in the image coordinate system, and (vi) retrieving, from the first images of the body part, an image of the body part corresponding to the position of the planar scan image.

56. (previously presented) The system of claim 55, further comprising a display for displaying the planar scan image and the first image of the body part corresponding to the position of the planar scan image.

57. (previously presented) The system of claim 56, wherein the processor determines the boundary of the body part in the retrieved image and displays the boundary of the body part on the display.